(This foreword is provided for information only and is not part of the draft addenda.)

FOREWORD

Draft Addendum 62*h* – 2nd Public Review Draft. This addendum is intended to replace section 6.2, plus fix a few other problems related to the IAQ procedure. It describes the requirements of the IAQ procedure in mandatory and enforceable language. It does not tell one when to use this procedure, only what to do. (Addendum 62*i* addresses the former issue.)

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Addendum 62*h*

Delete the last two bullets of section 6.1. (These are relevant to the IAQ Procedure but are listed here under the Ventilation Rate Procedure.)

6.1 Ventilation Rate Procedure: This procedure prescribes:

- the outdoor air quality acceptable for ventilation
- ~~outdoor air treatment when necessary~~
- ventilation rates for residential, commercial, institutional, vehicular, and industrial spaces
- ~~criteria for reduction of outdoor air quantities when recirculated air is treated by contaminant removal equipment~~
- ~~criteria for variable ventilation when the air volume in the space can be used as a reservoir to dilute contaminants.~~

Delete section 6.1.3.2 in its entirety and renumber remaining sections accordingly. (The gist of the first paragraph is covered adequately in 6.1.3 and notes to Table 2. The second two paragraphs are only applicable to the IAQ Procedure, but were included here under the Ventilation Rate Procedure.)

~~6.1.3.2 Recirculation Criteria. The requirements for ventilation air quantities given in Table 2 are for 100% outdoor air when the outdoor air quality meets the specifications for acceptable outdoor air quality given in 6.1.1. While these quantities are for 100% outdoor air, they also set the amount of air required to dilute contaminants to acceptable levels. Therefore, it is necessary that at least this amount of air be delivered to the conditioned space at all times the building is in use except as modified in 6.1.3.4.~~

~~Properly cleaned air may be recirculated. Under the ventilation rate procedure, for other than intermittent variable occupancy as defined in 6.1.3.4, outdoor air flow rates may not be reduced below the requirements in Table 2. If cleaned, recirculated air is used to reduce the outdoor air flow rate below the values shown in Table 2, the Air Quality Procedure, 6.2, must be used. The air cleaning system for the recirculated air may be located in the recirculated air or in the mixed outdoor and recirculated air stream (see Fig. 1).~~

~~The recirculation rate for the system is determined by the air cleaning system efficiency. The recirculation rate must be increased to achieve full benefit of the air cleaning system. The air cleaning used to clean recirculated air should be designed to reduce particulate and, where necessary and feasible, gaseous contaminants. the system shall be capable of providing indoor air quality equivalent to that obtained using outdoor air at a rate specified in Table 2. Appendix E may be referenced for assistance in calculating the air flow requirements for commonly used air distribution systems.~~

Delete existing section 6.2 and replace as follows:

6.2 Indoor Air Quality Procedure

The IAQ Procedure is a performance-based design approach in which the building and its ventilation system are designed to maintain the concentrations of specific contaminants at or below certain limits identified during the building design and to achieve the design target

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level of perceived indoor air quality acceptability by building occupants.

6.2.1 Contaminant Sources. Contaminants of concern for purposes of the designshall be identified. For each contaminant of concern, indoor and outdoor sources shall be identified, and the strength of each source shall be determined or estimated.

6.2.2 Contaminant Concentration. For each contaminant of concern a target concentration limit and its corresponding exposure period shall be specified, and an appropriate reference to a cognizant authority for the specified concentration limit shall be identified. (See Table 3 and Appendix C for some contaminant concentration guidelines.)

6.2.3 Perceived Air Quality. The criteria to achieve the design level of acceptability shall be specified in terms of the percentage of building occupants and/or visitors expressing satisfaction with perceived air quality.

6.2.4 Design Approaches. Minimum space and system outdoor airflow rates and all other design parameters deemed relevant (e.g. air cleaning efficiencies) shall be determined using any of the following: mass balance analysis, and design approaches that have proved successful in similar buildings. The steady-state mass balance equations in Appendix E which describe the impact of air cleaning on outdoor air and recirculation rates may be used for ventilation systems serving a single space. Approaches are also acceptable that are validated by contaminant monitoring and subjective occupant evaluations in the completed building. An acceptable approach to subjective evaluation is presented in Appendix C. It is also acceptable to apply one of these design approaches to specific contaminants and to use the Ventilation Rate Prodcedure to address the general aspects of indoor air quality in the space being designed.In this situation, the Ventilation Rate Procedure would be used to determine the design ventilation rate of the space and the IAQ Procedure would be used to address the control of the specific contaminants through air cleaning or some other means.

6.2.5 Documentation. When the IAQ Procedure is used, the following information shall be included in the design documentation:; the contaminants of concern included in the design process; the sources and estimated source strengths of the contaminants of concern; the target concentration limits and exposure periods, and the references for the values; the design approach used to control the contaminants of concern; and the background or justification for this design approach. If the design is based on approaches that have proved successful for similar buildings, the documentation shall include the basis for concluding that the design approach was successful in the other buildings and the basis for concluding that the previous buildings are relevant to the new design. If contaminant monitoring and occupant evaluation are to be used to demonstrate compliance, then the monitoring and evaluation plans shall also be included in the documentation.

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